

CLMPTO

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Claims 1-51 (cancelled)

52. (New) A method of analyzing elements of a three-dimensional array, comprising the steps of:
- (a) defining a subset of a three-dimensional array, said subset having a plurality of sequential two-dimensional arrays containing elements for analysis, wherein said elements within the two-dimensional arrays are represented by a first axis and a second axis, said first and second axes being two non-collinear axes and said third dimension corresponding to an axis orthogonal to the first and second axes;
 - (b) defining at least one region within a two-dimensional array, said at least one region having at least one element for analysis;
 - (c) defining a morphological mask having two dimensions and having at least one element, said morphological mask having at least one set element and at least one test element;
 - (d) defining a two-dimensional output array corresponding to a selected two-dimensional array containing elements for analysis;
 - (e) orienting said morphological mask with respect to said selected two-dimensional array containing said region having elements for analysis and with

respect to at least one of a predecessor two-dimensional array and a successor two-dimensional array;

(f) computing, using a mathematical operation, a result based on the properties of said at least one set element and the corresponding elements of said selected two-dimensional array containing elements for analysis and said at least one of a predecessor two-dimensional array and a successor two-dimensional array;

(g) plotting the computed result in the two-dimensional output array at one or more elements corresponding to said at least one test element of said morphological mask; and

(h) repeating steps (e), (f) and (g) while moving said morphological mask stepwise along said first axis and said second axis over said region having elements for analysis until every element of said region has been analyzed.

53. (New) The method of claim 52, further comprising repeating steps (d) through (h) until every region within successive two-dimensional arrays of said three-dimensional subset has been analyzed.

54. (New) The method of claim 52, wherein said first axis and said second axis representing elements within the two-dimensional arrays are rows and columns.

55. (New) The method of claim 52, wherein said two-dimensional arrays are video frames.

56. (New) The method of claim 52, wherein said third dimension corresponding to an axis orthogonal to the first and second axes represents time.

57. (New) The method of claim 52, wherein said third dimension corresponding to an axis orthogonal to the first and second axes represents frame sequence numbers.

58. (New) The method of claim 52, wherein the mathematical operation corresponds to taking the highest incidence of occurrence in a histogram.

59. (New) The method of claim 52, wherein the mathematical operation corresponds to assigning a value if and only if the value is the only value that appears at elements corresponding to the at least one test element of the morphological mask.

60. (New) The method of claim 52, further comprising recording the plotted result as a computer-readable file.

61. (New) The method of claim 52, further comprising displaying the plotted result.